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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,705	02/25/2002	Gerhard Rueckert	4299/PCT	3988

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EXAMINER

HORTON, YVONNE MICHELE

ART UNIT	PAPER NUMBER
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3635

DATE MAILED: 10/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
10/069,705

Applicant(s)
GERHARD RUECKERT

Examiner
YVONNE M. HORTON

Art Unit
3635



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 25, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 21-40 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 21-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). #3 6) ☐ Other:

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 and 21-40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21, it is not clear whether "it" in line 18 is referring to the first joint set or the joint of the first joint set. Clarification and correction are required.

Claim 21 recites the limitation "the lowermost joint" in line 17. There is insufficient antecedent basis for this limitation in the claim.

Regarding claims 1,3,4,21,23-26 and 37, the phrase "and/or" renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country,

more than one year prior to the date of application for patent in the United States.

Claims 1-4,21-25,28-29,33 and 37 are rejected under 35

U.S.C. 102(b) as being anticipated by US Patent #4,970,841 to ZEIGLER.

ZEIGLER discloses the use of a variable support structure with a modular construction consisting of at least one collapsible support structure module, which is bounded by joints (22,23,24,25) of a first joint set, which are corner joints of the support structure module and lie in a first surface (parallel to the first panel (110)), and by joints (26,27,28,29) of a second joint set, which are corner joints of the support structure module and lie in a second surface (parallel with the second panel (P)), and with at least one joint (38,39,40,41) and (50) of a third joint set, which lies outside of the first surface, whereby at least a portion of the joints of the first and second joint set is fixable in its position relative to one another, especially connectable with one another, by a guide mechanism (T) and (18,19,20,21), characterized in that, one joint (50) of the third joint set is connected with at least two joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set by a connecting element (30,31,32,33) and (34,35,36) that transmits essentially only tension forces. Regarding claim 2, in the support structure of ZEIGLER the joint (38,39,40,41) of the third joint set is connected with at least one joint (26,27,28,29) of the second joint set by a connecting element

(34,35,36) that transmits tension and compression forces. In reference to claim 3, the at least two joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set are connected with a common joint (50) of the third joint set. Regarding claim 4, the at least two joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set are connected with a first joint (50) of the third joint set, and the at least one, joint (26,27,28,29) of the second joint set is connected with a second joint (38,39,40,41) of the third joint set, and in that the first joint (50) of the third joint set is connected with the second joint (38,39,40,41) of the third joint set by a connecting element (30,31,32,33) and (34,35,36) that transmits compression and tension forces.

In reference to claim 21, ZEIGLER discloses the use of a deployable structure with a modular configuration consisting of at least one collapsible module, which is bounded by joints (22,23,24,25) of a first joint set, which are corner joints of the module and lie in a first surface parallel to panel (110), and by joints (26,27,28,29) of a second joint set, which are corner joints of the module and lie in a second surface (parallel to panel (P)), and with at least one joint (38,39,40,41) and (50) of a third joint set, which lies outside of the first surface, whereby at least a portion of the joints of the first and second joint set is fixable in its position relative to one another, especially connectable with one another, by a guide mechanism

(T) and (18,19,20,21), characterized in that, one joint (50) of the third joint set is connected with at least two joints (22,23,24,25) of the first joint set with which it is connected, and in that the forces arising upon loading of the structure by a useful working load and/or the self-weight load are transmittable as tension forces away from the joint (38,39,40,41) of the third joint set to the joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set via the connecting element (30,31,32,33) and (34,35,36) that transmits essentially only tension forces. Regarding claim 22 a joint (38,39,40,41) of the third joint set is connected with at least one joint (26,27,28,29) of the second joint set by a connecting element (10,11); (12,13); (14,15); and (16,17) that transmits tension and compression forces. In reference to claim 23 the at least two joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set and the at least one joint (26,27,28,29) of the second joint set are connected with a common joint (50) of the third joint set. Regarding claim 24, the structure of ZEIGLER also includes at least two joints (22,23,24,25) and (26,27,28,29) of the first and/or second joint set are connected with a first joint (38,39,40,41) of the third joint set, and the at least one joint (26,27,28,29) of the second joint set is connected with a second joint (50) of the third joint set, and in that the first joint (38,39,40,41) of the third joint set is connected with the second joint (50) of the third joint set by a connecting element

(34,35,36) that transmits compression and tension forces. In reference to claim 25, the first (110) and/or the second (P) surfaces are planes. Regarding claim 28, the guide mechanism comprises guide means (T) and 918,19,20,21), and in that at least one joint (22,23,24,25) of the first joint set of a corner of the module) especially arranged on the outer circumference of the structure is connected by the guide (T) means with a joint (102) of the second joint set of a neighboring corner of the module (91) especially arranged on the outer circumference of the structure, and a joint of the second joint set of the corner is connected by the guide means with a joint of the first joint set of the neighboring corner. In reference to claim 29, the guide means comprise connecting elements (10,11); (12,13); (14,15); and (16,17) that transmit tension and compression forces and that are crossed-over and pivotally connected with one another. Regarding claim 33, the expansion of the module is adjustable by an operating arrangement including the connecting elements 10,11); (12,13); (14,15); and (16,17) and joints (38,39,40,41) and (50). In reference to claim 37, the first joint set (22,23,24,25) of the first joints of the second joint set (26,27,28,29) and/or the joints (38,39,40,41) and (50) of the third joint set are connectable by a membrane (110,P) in such a manner so that thereby an at least partially closed outer surface of the first or second surface is formed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 30 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent #4,970,841 to ZEIGLER. ZEIGLER discloses the basic claimed structure except for explicitly detailing the diameter of the connecting elements and except for explicitly detailing the material used to form the connecting elements. Although ZEIGLER is silent in these regards, the selection of diameter size and type of material would have been an obvious matter of design choice that would depend upon the amount of rigidity required for the structure. Clearly larger

size diameters carry heavier loads and are more rigid, as is aluminum is a bit more rigid than plastic.

Allowable Subject Matter

Claims 26,27,31,32,34-36,38 and 40 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yvonne M. Horton whose telephone number is (703) 308-1909.

YMH
9/22/03

